

Thinking Skills Assessment Oxford

4502/11

Wednesday 3 November 2010

Morning

1 hour 30 minutes

SECTION 1 Thinking Skills Assessment

Instructions to Candidates

Please read this page carefully, but do not open this question paper until you are told that you may do so.

A separate answer sheet is provided for this section. Please check you have one. You also require a soft pencil and an eraser.

Please complete the answer sheet with your TSA candidate number, centre number, date of birth and name.

Speed as well as accuracy is important in this section. **Work quickly, or you may not finish the paper.** There are no penalties for incorrect responses, only points for correct answers, so you should attempt all 50 questions. All questions are worth one mark.

Answer on the sheet provided. Questions ask you to show your choice between five options. Choose the **one** option you consider correct and record your choice on the separate answer sheet. If you make a mistake, erase thoroughly and try again.

Any rough work should be done on this question paper.

Dictionaries and calculators may NOT be used.



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Please wait to be told you may begin before turning this page.

This paper consists of 30 printed pages and 2 blank page.



- 1 In the case of plastic drink bottles, recycling is not the best answer to the problem of garbage disposal. Ninety five per cent of soft-drink bottles sold in the United States are made of a compound of polyethylene (PET) which poses recycling problems. They are potentially carcinogenic if recycled into new food or drink containers. Recycled PET tends to absorb other chemicals before re-melting and these chemicals could leach into food or drink that is stored in a recycled container. However, if disposed of in landfill sites, plastic is not harmful to the environment. It can be squashed flat, so that it occupies little space and it is inert. Unlike other waste, it does not leach into soil or water, nor does it produce a dangerous build-up of methane.

Which one of the following best expresses the main conclusion of the argument above?

- A Plastic waste cannot be recycled safely.
 - B Plastic waste is not a danger to the environment.
 - C Food containers made from recycled plastic are potentially carcinogenic.
 - D There is sufficient space in landfill sites to accommodate plastic waste.
 - E Recycling is not the best method of disposing of plastic drink bottles.
- 2 Splashford Swimming Pool charges £2 per session for adults and £1 for children.

Also available is a Family Swimcard. At a cost of £50, the Family Swimcard allows unlimited use of the pool for one year for 2 adults and up to 3 children. For larger families, every additional child must pay half the children's rate each time.

Mr and Mrs Teal and their 4 children are keen swimmers. They used their Swimcard when the family went swimming 40 times last year.

How much did the Swimcard save the Teal family last year?

- A £ 50
- B £ 190
- C £ 230
- D £ 250
- E £ 270

- 3 Every year in this country there are over 8000 personal accidents on golf courses, yet it is estimated that as few as five per cent of all golfers take out adequate insurance against claims for injury. If more golfers could be encouraged to take out appropriate insurance policies the number of accidents could be dramatically reduced.

Which one of the following identifies the flaw in the argument above?

- A It ignores the fact that millions of golfers never have an accident.
 - B It assumes that all insurance policies provide adequate insurance against claims.
 - C It implies that the occurrence of golfing accidents is causally related to the lack of insurance.
 - D It overlooks the possibility that some accidents would not be covered by insurance.
 - E It ignores the fact that there are different kinds of insurance for different kinds of activity.
- 4 In 1997 the UK Government banned the owning of handguns after a man went on the rampage, killing several people, with a collection of legally owned firearms. In the time since then the number of crimes involving firearms as a whole has increased. The number involving legally owned firearms has gone up by 0.1% as compared to a 5% increase overall.

Which one of the following could be reliably concluded from the above information?

- A Banning handguns has simply increased gun crime.
- B The number of legally owned firearms has decreased.
- C The number of crimes involving handguns has stayed the same.
- D The law change in 1997 has not resulted in a reduction in gun crime.
- E It has become easier to acquire illegal firearms.

- 5 If drivers were made to pay for road use according to the amount of time they spent on the road, they would drive more dangerously. Experiments were conducted with volunteers using a driving simulator. In the first experiment, the volunteers were charged for time spent driving below 10mph in order to see how people coped with trying to avoid congestion. In the second experiment, they were charged for the time spent in a particular area. The results were alarming. The volunteers in the first experiment jumped many red lights in an attempt to keep their speed up. Those in the second frequently broke the speed limit, and overtook in dangerous situations. In the interests of road safety, we should not introduce such payment schemes.

Which one of the following is an underlying assumption of the above argument?

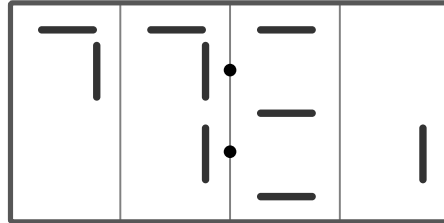
- A Driving simulators are a reliable guide to real-life driving.
 - B We need to do more experiments on schemes of payment for road use.
 - C More people should practise their driving skills using a simulator.
 - D Schemes involving payment for road use will not solve the problem of road congestion.
 - E Road congestion could be solved in ways other than payment for road-use schemes.
- 6 Acme Haulage pays dividends to its shareholders every six months. Better Ball Bearings pays its shareholders every eight months and Koffmore Chemists pays every eighteen months.

In January 1990 all three companies paid me a dividend.

In what month and year did this next happen?

- A July 1991
- B January 1992
- C July 1995
- D January 1996
- E January 2002

- 7 A woman has to get up for work at seven o'clock in the morning. She wakes up and looks over at her digital clock. Unfortunately, the batteries are low and the figures on the display, showing hours and minutes, aren't showing up properly. All she can see is the display below:



It is light outside, so she cannot be more than twelve hours late.

What is the greatest amount of time that she could be late waking up?

- A 1h 39min
 B 1h 59min
 C 2h 25min
 D 2h 35min
 E 2h 59min
- 8 The Richter Scale is used to measure the strength of earthquakes. It has the property that an increase of one unit on the scale represents a tenfold increase in the strength of the quake. Three earthquakes have the following values on the Richter Scale:

X : 2.0

Y : 3.0

Z : 4.0

Which one of the following statements about their relative strengths is true?

- A X is one-tenth the strength of Y and one-twentieth the strength of Z.
 B X is one-tenth the strength of Y and one-hundredth the strength of Z.
 C X is one-tenth the strength of Y and one-thousandth the strength of Z.
 D Z is twice as strong as X and Y is one-and-a-half times as strong as X.
 E Z is one-tenth stronger than Y which is one-tenth stronger than X.

- 9 A two-month study of major producers of ivory products showed that worldwide demand for elephant tusks for ivory had fallen sharply. Consequently it is safe to assume that there will be a general decline in elephant poaching.

Which one of the following, if true, would most weaken the above argument?

- A There are far fewer elephants than there were ten years ago, so poachers are finding it increasingly difficult to make a living from the ivory trade.
 - B Poachers now use high-powered rifles which make it far easier for them to kill larger numbers of elephants than was possible in the past.
 - C The worldwide demand for ivory fluctuates considerably at certain times of the year, so poachers stockpile ivory to sell when the market improves.
 - D More and more synthetic materials are being used as substitutes for ivory in the construction of such things as piano keys and billiard balls.
 - E The worldwide demand for ivory has been falling consistently for the last twenty years and many ivory poachers have found alternative sources of income.
- 10 Alcohol is largely to blame for a rise in the incidence of breast cancer. Research from St. George's hospital in Tooting shows the number of women with breast cancer rose significantly over a 10 year period. Researchers also found the average amount of alcohol women drank rose by more than 40% over the same period. The study used figures from a number of regional hospitals and compared drinking habits between 1997 and 2007.

Which one of the following best identifies the flaw in the above reasoning?

- A It confuses actual amounts drunk by some women with average consumption.
- B It gives a causal explanation when only a correlation is given.
- C It makes a sweeping generalisation on the strength of a very local sample.
- D It assumes that all serious illnesses are related to lifestyle.
- E It fails to specify the amount by which breast cancer has increased.

- 11 Many people imagine that large country houses in the eighteenth century had smooth lawns. But in those days there was no way of killing wild plants and weeds and, with the lawnmower not invented, the only method of cutting a lawn was by teams of gardeners with hand scythes; today's weed-free close cuts were unthinkable. Given this, lawns must have been like flowery meadows.

Which one of the following best expresses the main conclusion of the argument above?

- A** Modern lawns are kept smooth only with the use of weedkillers and lawnmowers.
- B** The upkeep of eighteenth century lawns required the employment of large numbers of gardeners.
- C** In the eighteenth century, lawns were not smooth but more like flowery meadows.
- D** It is more natural to have a lawn like a flowery meadow than one kept in smooth condition.
- E** Modern lawns would seem boring to a person from the eighteenth century.
- 12 Sue and Ben are buying some kitchen goods at a shop which is having a sale. The terms of the sale are as follows:

<i>Total marked price of purchases (before discount)</i>	<i>Reduction (%)</i>
<i>Up to £50</i>	25
<i>Up to £100</i>	33
<i>£100 or more</i>	50

The marked prices of the goods they have chosen come to £96.

How much less would they actually spend, to the nearest £1, if they chose extra goods to the value of £6?

- A** £ 2
- B** £ 6
- C** £ 10
- D** £ 13
- E** £ 16

13

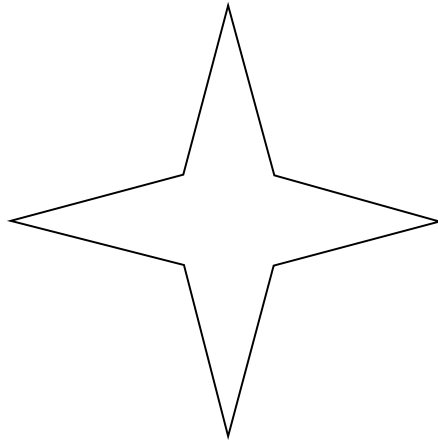
QUARTERLY ELECTRICITY BILL					
Meter Readings		Units Charged	Tariff	Pence per unit	Amount (£)
Previous	Present				
45856	47846	1990	standard	8.45	168.15
			FIXED CHARGES		12.30
65026	65284	258	Off-peak	3.90	10.06
			FIXED CHARGES		5.45
			TOTAL AMOUNT DUE		195.96

At the end of the quarterly charging period to which the above bill relates, the householder changed her electricity consumption pattern. In the next quarter she roughly halved her standard consumption and increased her off-peak consumption by about ten times.

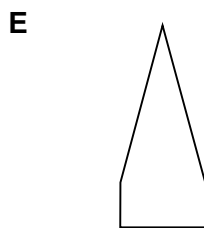
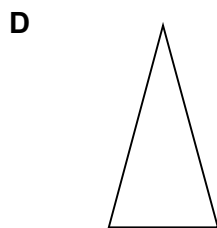
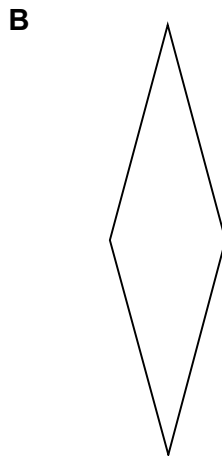
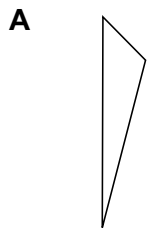
What approximate total bill should she expect for the next charging period?

- A £ 90
- B £ 120
- C £ 150
- D £ 170
- E £ 200

- 14 The diagram shows the outline of a window which is intended to be composed of a number of panes of glass, all of the same size and shape.



Which one of the shapes below could be used to fill this window?



15	<i>Statement</i>	<i>Young smokers' perceptions of parents' attitudes to their smoking</i>	<i>Parents' actual attitude to their children smoking</i>
	<i>Don't mind</i>	56 %	13 %
	<i>Rather they didn't</i>	22 %	15 %
	<i>Do not like it</i>	19 %	63 %
	<i>Don't know that they smoke</i>	3 %	9 %

Which one of the following conclusions is best supported by the data given above?

- A** Young people are likely to be more tolerant of smoking than their parents.
- B** Young people tend to underestimate their parents' disapproval of their smoking.
- C** More than half of young people's parents are tolerant of smoking.
- D** Smoking in a young person can lead to a deterioration in relations with their parents.
- E** Parents are unlikely to express strong disapproval of their children's habits.

- 16** The siting of mobile phone masts is a controversial matter in the UK, particularly when they are situated at or near schools and hospitals. The Stewart Report concluded that the balance of evidence indicated that there was no general risk to the health of people living near mobile phone masts but recommended a regular audit of Radio Frequency Radiation (RFR) emissions from masts sited near schools and hospitals. The Government have complied with this latter recommendation and carried out regular audits all of which show that RFR emissions are far below the levels of national and international guidelines. Therefore, mobile phone masts are safe and not injurious to health and can be sited anywhere.

Which one of the following is an underlying assumption of the above argument?

- A** RFR emissions are more injurious to younger people.
- B** RFR emissions can affect sensitive equipment in hospitals.
- C** The audits are not carried out frequently.
- D** Mobile phones are an essential part of modern communications.
- E** The only health risk from mobile phone masts is RFR emissions.

- 17** The expense of advertising adds greatly to overall production costs and thus to the prices of goods when they reach the public. There is particular public resentment of mass advertising for rival brands of products such as petrol or detergents - which, most people suspect, are so similar in character as to be virtually indistinguishable except in their packaging. Much of the huge sum devoted to advertising could be used more fruitfully to bring down prices. Therefore, advertising disadvantages the consumer.

Which one of the following, if true, would most weaken the above argument?

- A** Manufacturers would not spend money on advertising unless they believed it would benefit the public.
 - B** By increasing competition, advertising leads to an overall improvement in the quality of goods.
 - C** Advertising does not affect in any way what customers choose to buy.
 - D** The advertising industry is able to employ people who would otherwise be out of work.
 - E** Advertisements often make misleading claims about the quality of the product.
- 18** I have been asked to move 120 boxes weighing 25kg each and 90 boxes weighing 20kg each from the ground floor to the fifth floor of the office block in which I work. Unfortunately, nobody is available to give me any help.

There is a sign in the lift which reads:

MAXIMUM LOAD 4 persons or 400 kg

I weigh 80kg.

What is the minimum number of journeys I will have to make from the ground floor to the fifth floor?

- A** 10
- B** 12
- C** 13
- D** 15
- E** 16

- 19 It is 12 noon and I have just arrived in the centre of town for a meeting that is due to last for at least three and a half hours.

After this meeting, I have an important appointment at 6.00pm which requires me to leave before 5.30pm.

There are 5 car parks in the town centre that charge as follows:

Grove Street	£6.00 per day, flat rate.
Victoria Square	£1.00 per hour or part of an hour.
Central Park	Free for 2 hours, then £2.00 per hour or part of an hour.
Bonningtons	Free for 1 hour, then £1.50 per hour or part of an hour.
Grange Road	£2.50 for 3 hours, then £1.50 per hour or part of an hour.

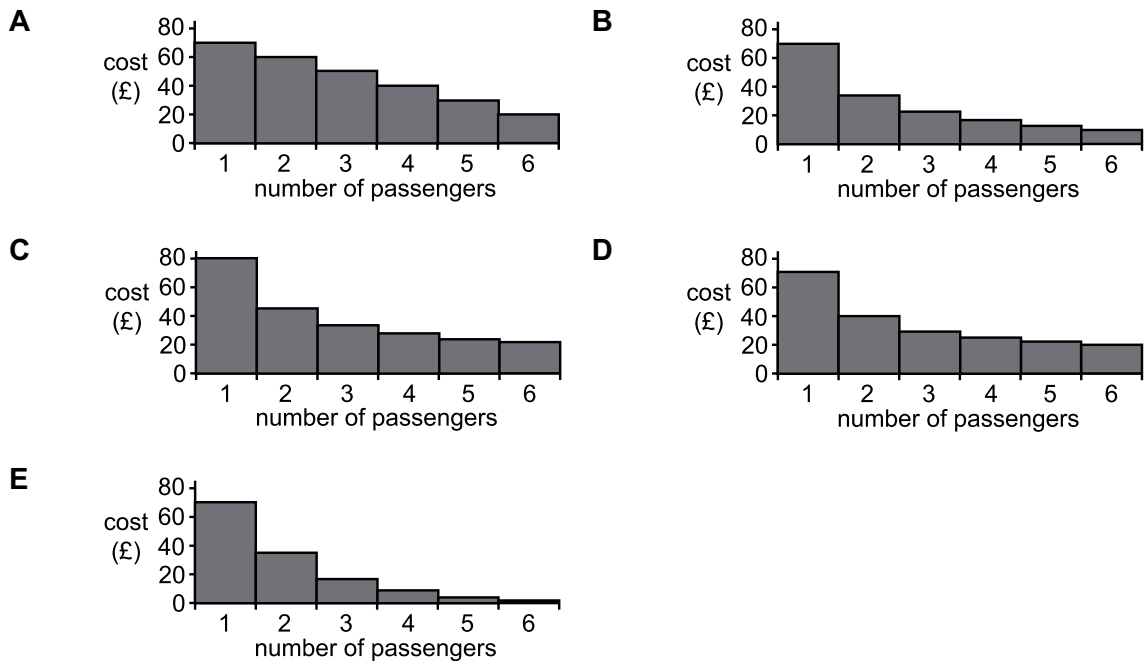
In which car park should I leave my car in order to pay as little as possible in parking fees?

- A Grove Street
- B Victoria Square
- C Central Park
- D Bonningtons
- E Grange Road

20 A taxi service advertises its rates for travel to the local airport as shown below:

<p><u>AIRPORT TAXI SERVICE</u> £70 (includes return journey) EXTRA PASSENGERS £10 EACH (vehicles licensed to carry 6 passengers)</p>
--

Which one of the following bar graphs correctly illustrates how the cost per person decreases as more people get together to share a taxi to the airport?



21 Increasingly, the affluent middle classes are choosing private health care. This has been accompanied by steady decline in the National Health Service (NHS), evidenced by poor funding, understaffing, long waiting lists and substandard hygiene. The obvious solution would be to ban private healthcare, since its take-up by a privileged but growing minority is inevitably driving down standards in the NHS.

Which one of the following is the best illustration of the flaw in the above argument?

- A** The NHS has recently received funding increases.
- B** The NHS is not in decline, we simply expect more of it these days.
- C** People might choose private health care because of decline in the NHS.
- D** People should have the freedom to choose the best healthcare option.
- E** The NHS would flourish if funds were not diverted to private health care.

- 22** Amrik cannot afford to buy the Advanced version of the software. The Professional version is even more expensive, so Amrik cannot afford that either.

Which one of the following most closely parallels the reasoning used in the above argument?

- A** Amrik does not like foods containing garlic. This pizza contains garlic and anchovies, so Amrik won't like it either.
- B** It is too far for Amrik to walk to the garden centre. The shops are closer, so he will go there instead.
- C** Amrik cannot sleep at night if he drinks a cup of tea after 9pm, because tea contains caffeine. Coffee contains more caffeine than tea, so Amrik won't drink that after 9pm either.
- D** Amrik didn't have enough patience to complete the 1000 piece jigsaw he got for his birthday. The Times crossword also requires patience, so he won't complete that either.
- E** Amrik's hair is shorter, and Callum's hair is longer, than Bill's. So Amrik's hair is shorter than Callum's.
- 23** We do not pay a fixed amount for electricity, gas or telephone calls irrespective of how much we use. How is it then that some people are still expected to do so in the case of water? People who use relatively little water should no longer be required to subsidise those who use a great deal. Water meters should therefore be introduced in all regions as soon as it is feasible to do so.

Which one of the following best illustrates the principle underlying the argument above?

- A** Our town is providing a series of recycling banks so that residents who wish to recycle household waste can do so.
- B** When we eat out as a group we divide the bill by the number of people dining.
- C** The government is paying compensation to house owners whose properties were damaged in the floods.
- D** The new road is going to be financed by a toll system rather than out of taxation.
- E** People who have difficulty paying the annual television licence fee may pay in monthly instalments.

- 24 A secretary is in a bad mood with her boss and has to write three letters intended for three different people. She makes sure that each of the recipients of the letters will receive one written to someone else.

In how many different ways can she send three different letters to achieve this?

- A 1
- B 2
- C 3
- D 5
- E 6

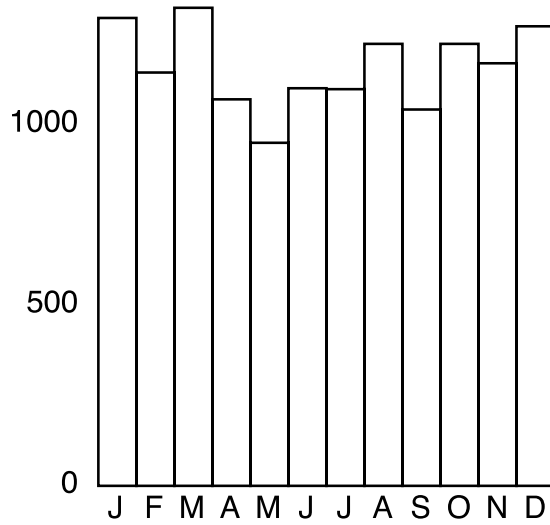
- 25 Anne is a researcher working for an insurance company which has decided to send out a safety awareness mailshot to its customers during the month which costs it most in claims. She examines the average accident statistics bearing in mind that an accident categorised as a write-off costs 10 times more than one categorised as serious which, in turn, costs 10 times more than one categorised as slight.

<i>Month</i>	<i>Write-off</i>	<i>Serious</i>	<i>Slight</i>	<i>Totals</i>
<i>January</i>	30	539	2891	3460
<i>February</i>	24	414	2513	2951
<i>March</i>	31	550	2972	3553
<i>April</i>	19	401	2901	3321
<i>May</i>	19	440	2993	3452
<i>June</i>	24	509	3230	3763
<i>July</i>	24	515	2899	3438
<i>August</i>	26	477	2732	3235
<i>September</i>	22	510	2867	3399
<i>October</i>	30	474	3236	3740
<i>November</i>	21	578	2895	3494
<i>December</i>	26	381	2967	3374

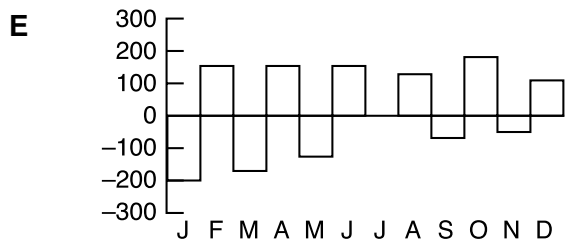
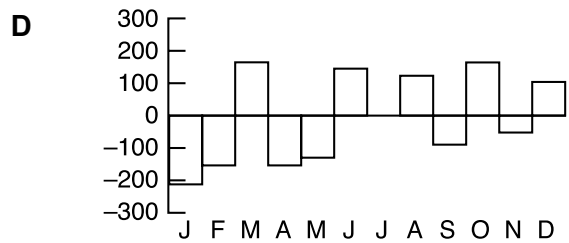
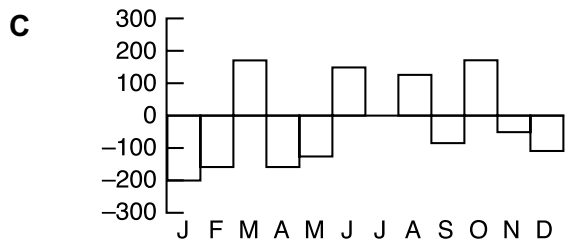
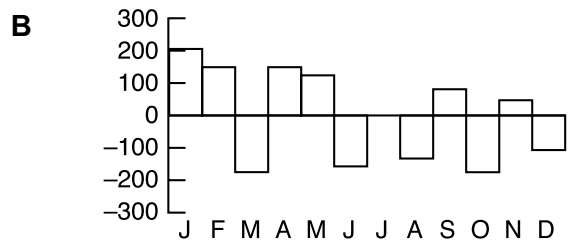
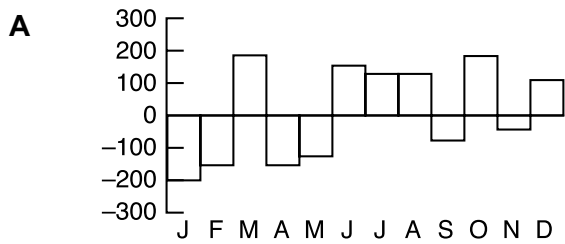
In which month does Anne conclude the mailshot should be made?

- A January
- B March
- C June
- D October
- E November

26 The graph below shows Mr Evans' bank balance at the end of each month in a year.



Which one of the following graphs could show the actual change in his bank balance each month?



- 27** Store loyalty cards are designed to encourage customers to use one supermarket only. But all the major supermarkets now have loyalty cards, so people are able to possess a loyalty card for all of their local supermarkets. So it is pointless for the supermarkets to continue using them and they might as well abandon the costly schemes, because they cannot be the primary reason that people choose to shop at a particular store.

Which one of the following best expresses the main conclusion of the above argument?

- A** People obtain loyalty cards for all of their local supermarkets.
 - B** Loyalty schemes are not the primary reason that people choose to shop at a particular store.
 - C** Supermarkets might as well abandon loyalty schemes.
 - D** Loyalty card schemes cost too much to be worthwhile.
 - E** Store loyalty cards are designed to encourage customers to use one supermarket only.
- 28** The demand for blood donors is increasing all over the world. In Western countries, in particular, demand has been rising so rapidly that shortages have begun to appear. In all such countries, demand is growing much faster than rates of growth in populations aged 18-65 from whom donors are drawn. And, despite a massive research effort to find alternatives, it remains true that in medicine there is no substitute for human blood.

Which one of the following conclusions can be drawn from the passage?

- A** As the demand for blood has increased, so has the supply fallen.
- B** The rate of growth of the blood-donor population has been slowing recently.
- C** The increase in the rate of demand for blood is mainly due to population growth.
- D** If more blood donors could be found, there would be no need to find a substitute for human blood.
- E** The problem of the increase in demand for blood shows no sign of disappearing.

- 29** Powdered rhinoceros horn has often been claimed to have aphrodisiac properties. However, a recent investigation showed no evidence that it has any chemical effect whatsoever on the human nervous system. What is more, in an experiment in which 100 people were given powdered rhinoceros horn and another 100 people were given powdered rice, without knowing what they were taking, more of those taking the rice indicated that they felt an increase in sexual arousal than did those taking the rhinoceros horn. This demonstrates conclusively that rhinoceros horn is not an aphrodisiac.

Which one of the above is an underlying assumption of the argument in the passage?

- A** Powdered rice does not have significant aphrodisiac properties.
 - B** Claims made about aphrodisiacs are in general untrustworthy.
 - C** Powdered rice has no effect on the human nervous system.
 - D** The claims about its aphrodisiac properties are spread to create a demand for rhinoceros horn.
 - E** A ban on the trade in rhinoceros horn should be enforced worldwide.
- 30** Fred, Joe and Bill do plumbing, electrics and plastering respectively and work together on certain building jobs. They will each take on any job involving all three types of work, sub-contract to the others where necessary and sort out any payments at the end of the month.

At the end of March, Bill has done £300 of work for Fred and £200 of work for Joe. Joe has done £100 of work for Fred and £250 of work for Bill. Fred has done £150 of work for Joe and £200 of work for Bill.

Which of the following will settle their accounts?

- A** Bill and Joe each pay Fred £25.
- B** Fred pays Bill £50.
- C** Fred and Joe each pay Bill £75.
- D** Bill pays Fred and Joe £100 each.
- E** Joe pays Bill £150 and Fred £50.

- 31 Rachel intends to buy some toiletries for her five brothers as a present. She thinks that Rex would like aftershave, Tom talc, Magnus body spray and the twins, James and Henry, would like shower gel. They all have a liking for "Jasmine" brand. Her budget is a maximum of £10.00 and if she can spend less so much the better. She finds that the items are available in combination packs as well as individually. Prices are:

Aftershave	£2.99
Body spray	£1.99
Talc	£1.99
Shower gel	£1.49
Aftershave & talc	£4.49
Shower gel & body spray	£2.99
Body spray double pack with free talc	£3.95
Aftershave & shower gel	£3.49

What is the least amount of money Rachel must spend?

- A £7.48
 - B £8.46
 - C £8.47
 - D £8.97
 - E £9.95
- 32 A survey claimed that in 1990 40% of the adult British population smoked. It claimed further that in 1991, after an anti-smoking campaign, only 30% of the adult British population smoked. It reported a 10% fall in the number of smokers. However, the campaign organisers, in their advertising, reported a 25% fall in the number of smokers.

The campaign organisers' advertisement reflects:

- A the change in the number of smokers expressed as a percentage of the population in 1990.
- B the change in the number of smokers expressed as a percentage of the population in 1991.
- C the change in the number of smokers expressed as a percentage of smokers in 1990.
- D the change in the number of smokers expressed as a percentage of smokers in 1991.
- E the change in the size of the population expressed as a percentage of the population in 1990.

- 33** The United States attempts to reduce the supply of illegal drugs by intercepting shipments and eradicating illegal crops. Despite these efforts, illegal drugs are still readily available because growers, for example those in Colombia, move to different areas and plant smaller plots that are harder to find. So more effort should be made to reduce demand. This does not simply mean reducing the total number of people using illegal drugs. Because the important task is to cut consumption by heavy users, drug-dependent criminals in the country's jails should be treated for their addiction. In this way drug-related social problems can be reduced.

Which one of the following, if true, most strengthens the above argument?

- A** The price of drugs has not fallen despite efforts to reduce their supply.
 - B** Statistics show that many crops of illegal drugs in Colombia have been eradicated.
 - C** Most of the drug users in US jails do not want treatment for their drug addiction.
 - D** Heavy drug users are responsible for committing most of the drug-related crime.
 - E** The majority of the US public are in favour of rehabilitating prisoners who are drug users.
- 34** While the benefits of cardio-vascular exercise are well known, studies have shown that strenuous exercise is actually damaging to the immune system. Athletes, although fit in general terms, are highly susceptible to colds and flu. What's more, many sports people develop cancer at an early age despite their healthy diets and high levels of physical fitness. It is thought by doctors that a healthy immune system is the best way to prevent cancer. Therefore, to increase your chances of a long life, maintaining a high level of physical fitness is ill-advised.

Which one of the following identifies the flaw in the above argument?

- A** There is little or no evidence of a link between strenuous exercise and the immune system.
- B** There may be other reasons for cancer amongst sports people, e.g. the use of performance-enhancing drugs.
- C** There is no guarantee that a healthy immune system will prevent someone from developing cancer.
- D** There may be more lives prolonged by high levels of fitness than are lost to early-age cancer.
- E** There are much more damaging things for the immune system than strenuous exercise.

- 35** Although the general public are demanding action to reduce the number of pedestrians killed in road accidents in residential areas, road bumps in these areas should be abolished. Road bumps were introduced to residential areas because they were cheap, quick to implement, and showed that Local Authorities were acting to reduce road deaths. They are admittedly effective at restricting the speed of traffic but they also hinder emergency services. The London Ambulance Service has stated that they cause delays in reaching critically ill people and this results in 500 deaths per year from heart failure alone in the London area. Electronic speed signs, and more effective signing of speed limits in residential areas, would be just as effective at reducing pedestrian deaths.

Which one of the following best expresses the main conclusion of the above argument?

- A** The general public are demanding action to reduce the number of pedestrians killed in road accidents in residential areas.
- B** Road bumps are cheaper and easier to implement than other ways of reducing traffic speed.
- C** Electronic speed signs are just as effective as road bumps.
- D** Road bumps should be abolished in residential areas.
- E** Road bumps interfere with the Emergency Services causing many deaths.
- 36** The fuel consumption of Ted's new car is given in the manufacturer's data sheet as follows:

<i>Speed</i>	<i>50km/h</i>	<i>90km/h</i>	<i>110km/h</i>
<i>Consumption l/100km</i>	7.5	6.0	6.5

The cost of fuel is 80c per litre. Ted's journey to work consists of 20km on country roads normally at 90km/h, 40km on motorway at 110km/h and 20km in town at 50km/h.

How much does his drive to work cost him?

- A** \$4.16
- B** \$4.24
- C** \$4.26
- D** \$4.40
- E** \$5.30

37 Maggie is preparing 300 information packs so that she can respond to enquiries for her holiday cottages. Each pack contains:

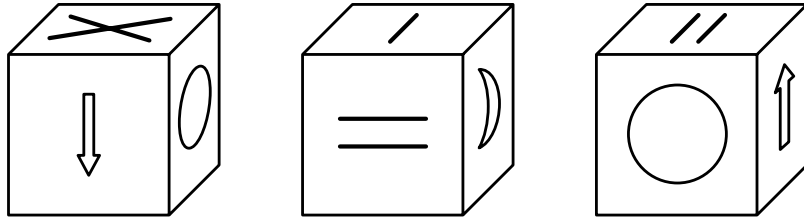
- A basic information sheet - this is printed on A4 sized paper on both sides so that it may be folded to form 4 pages.
- A sheet with prices on one side and a booking form on the other - two of these are printed on a sheet of A4 paper which is then cut in two.
- An A4 information sheet giving details of some local amenities - this is printed on one side only.
- A single A4 sheet colour brochure printed on both sides - this is provided free by the local Angling Association.

The local printer charges 2p per side of A4 for reproduction.

How much will her 300 packs cost her?

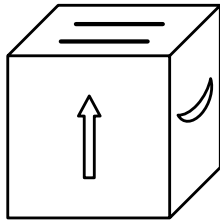
- A** £ 15
- B** £ 24
- C** £ 30
- D** £ 36
- E** £ 42

38 Three views of the same die with unusual symbols are shown below:

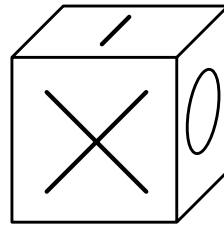


Which one of the following dice is **not** identical to the die above?

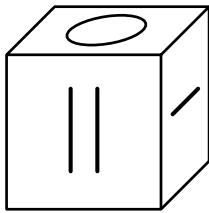
A



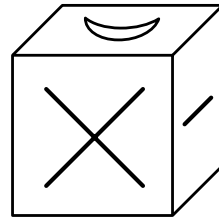
B



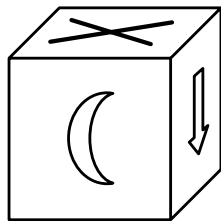
C



D



E



- 39** There has been a recent trend to paint speed cameras bright yellow so that they can be seen easily and so act as a deterrent to speeding motorists. This is the exact opposite of what should happen. If cameras are obvious, drivers tend to drive very fast between them and brake hard when they see one ahead, which is a very dangerous practice. If cameras were virtually invisible, drivers would have to keep within the speed limits all of the time for fear of being caught unawares.

Which one of the following can be drawn as a conclusion of the above passage?

- A** Painting speed cameras yellow does not make them a deterrent to speeding motorists.
 - B** Making speed cameras easily visible is the exact opposite of a sensible policy.
 - C** The point of installing speed cameras is to encourage drivers to reduce their speed.
 - D** When speed cameras are easily visible drivers drive in a very dangerous way.
 - E** If speed cameras were difficult to see, drivers would be likely to keep within speed limits.
- 40** Success in modern America is very much measured by the quantity of material possessions one has. A lack of material possessions means one is judged to be unsuccessful. Those people with few material possessions therefore must feel a strong sense of failure.

Which one of the following is an underlying assumption of the above argument?

- A** Most modern Americans are successful.
- B** Success can be precisely measured.
- C** Over-emphasis on material possessions creates social problems.
- D** Excessive desire for material possessions is psychologically damaging.
- E** People in America with few material possessions want to be seen as successful.

- 41** The Eurovision Song Contest is coming in for increasing criticism. No matter how awful the song, Greece can always be relied on to give a maximum 12 points to Cyprus and Russia will vote for the Ukraine. In one year the political voting was so blatant that the commentator for the UK described it as 'ridiculous'. With more Eastern European countries competing, their power blocs are so strong that Western European countries have little hope of winning. The result of the Eurovision Song Contest is now determined by geo-politics and not by music.

Which one of the following, if true, would most weaken the above argument?

- A** Britain nearly always gives high marks to the Irish song.
 - B** The Eastern European songs are usually sung in English.
 - C** Eastern European countries have shared tastes in music.
 - D** Western European countries have won 75% of contests in the past.
 - E** Poland has never won the Eurovision Song Contest.
- 42** The coffee machine in our office offers a choice of regular or decaffeinated coffee; black or with one of three sorts of milk (full, semi-skimmed, skimmed); and, for those who want sweetening, either one or two spoonfuls of sugar or one or two non-sugar sweetening tablets.

How many different kinds of coffee can be made?

- A** 11
- B** 24
- C** 32
- D** 40
- E** 48

- 43 This is the draw for this year's end of season knockout trophy (and the results so far) competed for by sixteen teams that take part in a quiz league:

First Round	Quarter-finals	Semi-finals	Final
Amber Aardvarks 78 Blue Bunnies 62	} Amber Aardvarks 125	} Amber Aardvarks 115	} Indigo Iguanas
Crimson Cats 84 Emerald Elephants 58			
Fawn Frogs 74 Green Geckos 88	} Green Geckos 116	} Indigo Iguanas 118	
Indigo Iguanas 82 Lilac Lemurs 70			
Mandarin Marmots 56 Orange Ocelots 76	} Orange Ocelots 130	} Orange Ocelots 128	
Red Rhinos 78 Silver Sharks 66			
Turquoise Turtles 56 White Wombats 74	} White Wombats 119	} White Wombats 121	
Violet Vipers 80 Yellow Yaks 68			

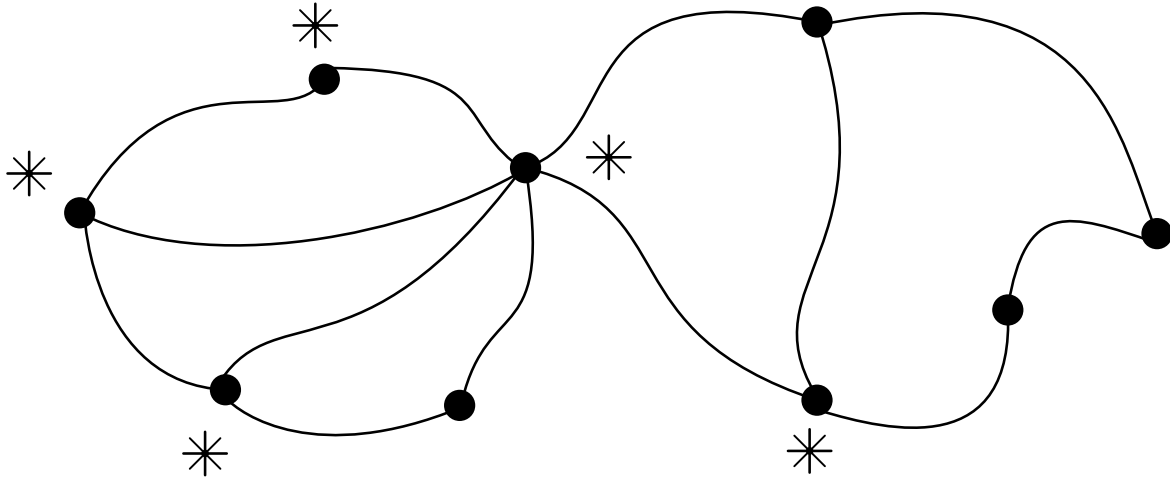
Although teams are drawn against each other, all participating teams in each round answer the same set of 50 questions, worth 2 points each.

In the first round, each 'match' is won straightforwardly by the team with the higher number of points. This team carries half of these points through to the next round; then in subsequent rounds winners carry through half of their 'new' points from the previous round. For example, the Amber Aardvarks carried 39 points through to their quarter-final, then in the quarter-final itself they added 86, and so carried 43 through to their semi-final.

How many more points (at least) must the Indigo Iguanas score than the Orange Ocelots in the final to win the trophy?

- A 4
- B 6
- C 8
- D 10
- E 12

- 44 My local park has a network of paths linking various locations, as shown below. The stars on the map represent five of the park's landmarks: the fountain, lake, bandstand, statue and bowling green.



When I walk round the park, I often vary my routes and I do not always take the shortest route from one place to another. I have noticed that when I go from the statue to the fountain, I always pass the bandstand, but that going from the lake to the bowling green, I never pass the fountain unless I pass the bandstand twice.

How many of the stars on the diagram can be identified from the given information?

- A 0
- B 1
- C 2
- D 3
- E 5

- 45** There is a proposal to change our passports from the present, rather imposing, book-type documents to small plastic cards, a proposal which should be rejected. The cards are seen as having many advantages. For example, they will be easier to fit into people's pockets, something which will become more important as other countries move towards compulsory identity cards. But this supposed advantage of smaller size is actually a disadvantage. It is the very fact that passports cannot be slipped into a holidaymaker's pocket (and from there into the sand on the beach) that makes us take special care of them. It is, after all, a very important document.

Which one of the following best expresses the main conclusion of the above argument?

- A** The advantages of the smaller passports are fewer than people think.
 - B** The proposals to replace our passports with plastic cards should be rejected.
 - C** The importance of passports will diminish if they are small plastic cards.
 - D** People will take less care of passports which are small plastic cards.
 - E** The proposal to change our type of passports should be looked at more carefully.
- 46** If Nusra is to find a job that really interests her, then she must be prepared to earn much less than she does in her present job. However, because she is unwilling to sacrifice her current high wage, she will not find a job that would interest her.

Which one of the following most closely parallels the reasoning in the argument above?

- A** If Lopez wants to do better at school, he will need to give up his part-time job. He stresses that he wants to improve his school work, so he will obviously have to give up his job.
- B** If Julie and Mike are to adopt a child, they have to be able to show that they have a stable relationship. Unfortunately, they haven't got a good history of stability in their marriage, so they are going to have to work hard at improving this.
- C** If Myra is to start up her own business, she will need at least £5000 to cover her start up costs. She has only £1000, so she will need to borrow the rest from the bank.
- D** If Paul and Lisa are to be happily married, they must talk to each other more. Their counselling sessions have shown, however, that they find this impossible, so their marriage will not be a happy one.
- E** If Carl and Tesfa are going to go through with their divorce, they must be sure that they don't want to give their marriage another go. They have both insisted that divorce is the only option, so further counselling is pointless.

- 47** Launched in January 2008 as part of the U.S. administration's response to the looming financial crisis, the creation of the Council of Financial Literacy, though not without merit, is not necessarily the best way to approach things, especially in regard to the meltdown of subprime mortgages. It's certainly true that many subprime mortgages were given to borrowers who may not have understood the risks. Often borrowers did not even realise that their monthly payment would rise if interest rates went up. Subprime borrowers on an adjustable interest rate, whose mortgage repayments went up by just 7%, accounted for more than 40% of the repossessions begun in the 4th quarter of 2007. Would better information or education in financial literacy have made any difference? We don't need a committee to tell us the simple solution. Don't offer subprime mortgages.

Which one of the following illustrates the principle underlying the above argument?

- A** It wouldn't make sense to withdraw strong alcohol from sale if more could be done to educate people about the dangers of drinking it.
 - B** Attempting to educate people about the dangers of drinking strong alcohol is pointless. People would ignore the warnings anyway.
 - C** Attempting to educate people about the dangers of drinking strong alcohol doesn't make sense. It would make more sense if people just couldn't buy it.
 - D** Creating committees to look into the problems caused by drinking strong alcohol is pointless. A committee would seldom reach a unanimous decision.
 - E** Creating committees to look into the problems caused by drinking alcohol is unnecessary. It would be more effective for alcohol manufacturers to put warning labels on their product.
- 48** The ferry from Harport to Selmer is at sea for 1 hour 15 minutes and at its berth at either end for 30 minutes. The hovercraft service between the same ports takes only 45 minutes and is berthed for 15 minutes before returning.

If both leave Harport at 08:00 what is the next time they will both be at the same port together?

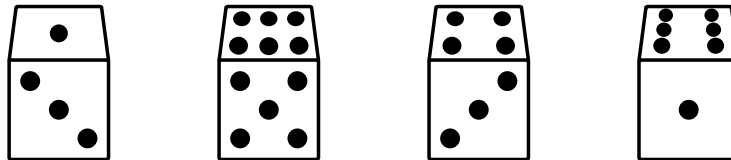
- A** 09:45
- B** 12:45
- C** 14:45
- D** 15:00
- E** 18:00

- 49 All the telephone numbers in my village have six digits and begin with 58. I have accidentally torn up and thrown away a piece of paper on which I had written the telephone number of a friend who lives nearby. The only piece I can find is the scrap shown below:

8011

How many different phone numbers in my village could be consistent with this extract?

- A 2
 B 10
 C 11
 D 12
 E 22
- 50 On a normal die, opposing faces add up to 7. Four views of the same die on which the numbers are arranged differently from a normal die are shown below. The unseen face has the number two on it.



How many spots are on the face opposite the two on this die?

- A 1
 B 3
 C 4
 D 5
 E 6

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